

# ***Exploratory Investigation of Transport Vortex-Induced Performance Benefits on a Fighter Aircraft***

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- AFF project measured 14% to 21% drag savings between F-18's
- Potential for >50% drag savings with larger aircraft as the lead
- Predictions show UAV's could operate without engine thrust
- Investigation to date limited to some computational aerodynamic work



# Overview



## Experiment

- One formation flight of dissimilar aircraft
- Dryden's DC-8 is the lead aircraft & F-18 as the trail aircraft
- Using AFF experience and simplified data gathering
- Goal is to obtain first order fuel flow savings and determine viability of stabilizing in large aircraft's vortex

## Status

- Simulation developed and evaluated
- Mission Rules, hazard analysis, & flight cards complete
- Briefing to RS branch chief, Dryden CE, & Tech brief completed
- Flight scheduled on June 26th with July 25th as a back-up

## Safety

- Hazard analysis shows no accepted risks
- Experiment uses techniques/practices developed during AFF
- Pilot experienced: AFF project and simulation